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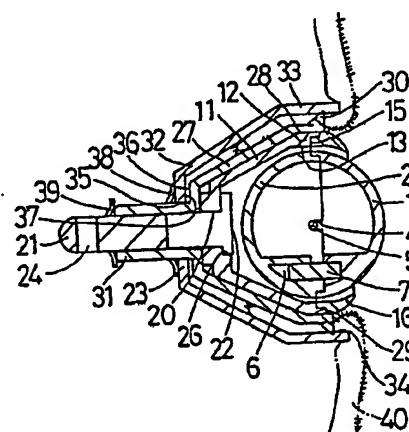
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(54) Eyeball device for stuffed toys and dolls

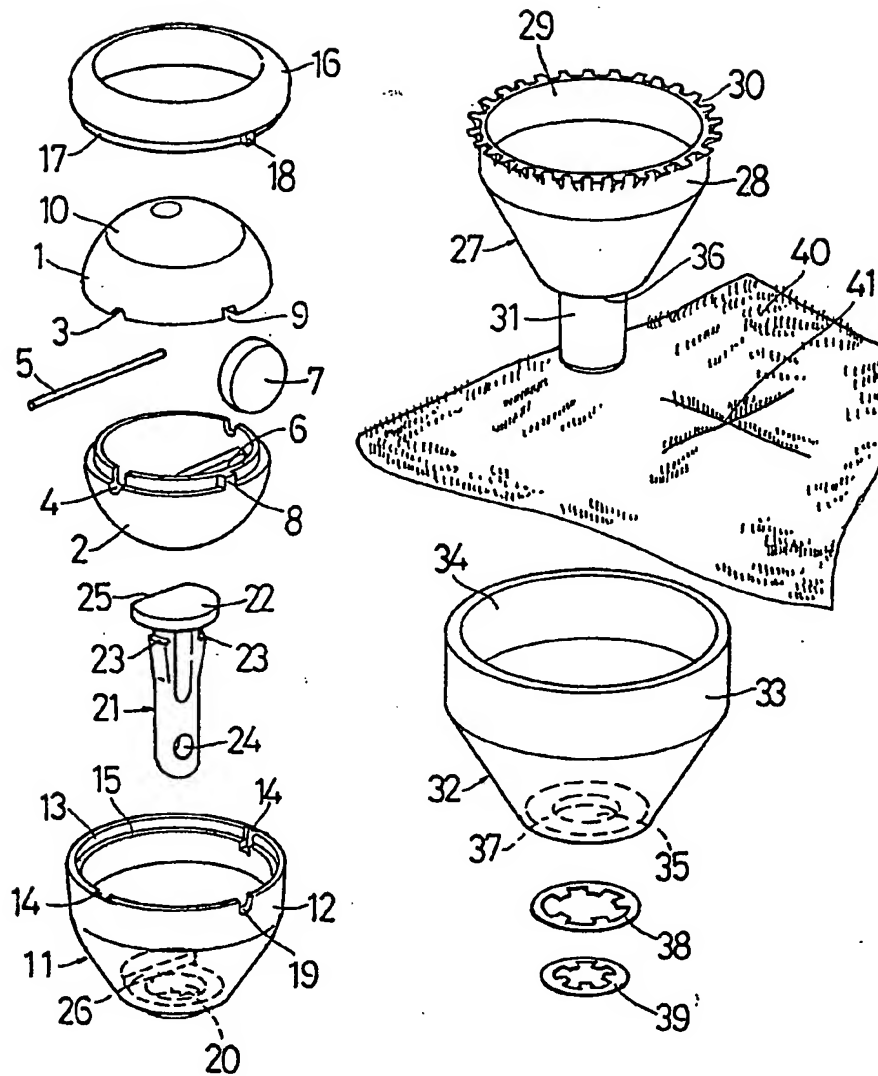
(57) An eyeball device for a stuffed toy or doll comprises a holding cup 11 having an eyeball 1, 2 mounted therein on a shaft 5. The holding cup 11 is mounted in an inner casing 27 which in turn is received in an outer casing 32. A toothed flange 30 on the inner casing 27 cooperates with the outer casing 32 to bite the outer cloth 40 of a toy or doll therebetween. The holding cup 11 comprises a shaft 21 which extends through a cylindrical portion 31 of inner casing 27 and is retained by locking washer 39. Cylindrical portion 31 extends through an aperture 35 in outer casing 32 and is retained by locking washer 38.

FIG.2



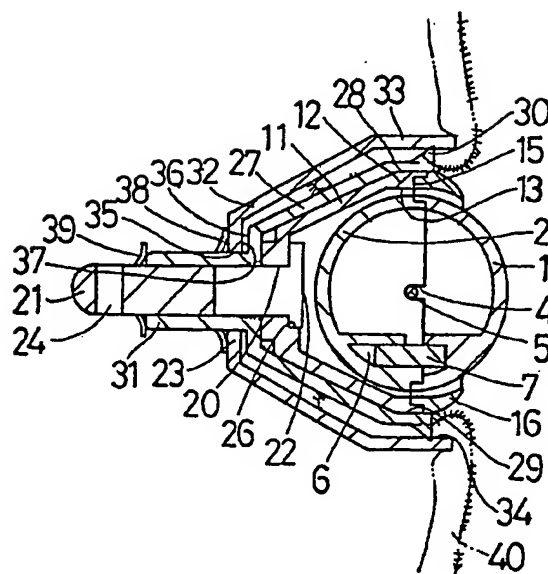
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FIG. 1



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FIG. 2



SPECIFICATION

Eyeball device for stuffed toys and dolls

5 The present invention relates to an eyeball device for stuffed toys and dolls.

10 Eyeball devices wherein the eyeball is movable to simulate the motion of eyeballs have been disclosed, for example, in Japanese Utility Model Publication Nos. 16924/1958 and 18027/1959. Such known devices having eyeballs which are movable usually have a complex structure and are bulky, and require particularly designed mounting indentations or mounting ports to enable them to be mounted in the dolls.

15 The above publications do not teach means for mounting the eyeball devices in the dolls. At present the eyeball devices are mounted by adhesion or by stitching, requiring careful and time consuming work. Furthermore, considerable skill is required to neatly or naturally finish the periphery of the eyes. Otherwise, problems arise in that the adhesive becomes adhered to the periphery of eyes, or a gap is formed between the eyeball device and the mounting portion.

25 The object of the present invention is to provide an eyeball device for stuffed toys and dolls, which enables the eyeball device to be easily mounted in a stuffed toy or doll and which, further, enables the periphery of the eyeball device to be naturally finished. The eyeball device is equipped with an eyeball-holding frame assembly which movably holds the eyeball, so that the eyeball is allowed to move depending upon the posture and direction of the dolls.

35 A member for mounting the eyeball-holding frame assembly consists of a pair of inner and outer casing frames which are fitted together to bite the outer cloth of the doll or the like, and is thus mounted very easily. Another object of the present invention is to provide structure in which the outer cloth of the doll or the like is bitten by the inner casing frame and the outer casing frame, so that the inner and outer casings are mounted.

45 The present invention further provides an eyeball device of the structure in which the inner and outer casing frames, that are mounted as described above, have an outwardly open cavity, respectively, so that the eyeball-holding frame assembly is fitted thereto from the outside. According to the present invention, therefore, there exist no such limitations that the eyeball must be incorporated in advance in the corresponding portions of the doll or the like or that the eyeball-holding frame assembly must be handled together with the inner and outer casing frames as a unitary structure. Namely, the assembling procedure is neatly arranged to markedly increase the assembling operation.

60 In order to achieve the above-mentioned objects, the present invention deals with the eyeball device of the structure in which an outer cloth of a stuffed toy, doll or the like is bitten by a pair of inner and outer casings which hold an eyeball-holding assembly in which an opening is provided in one side surface of a holding frame, an eyeball body is rotatably supported by shaft in the opening, and a stabilizer weight is

provided in a portion of the eyeball body so that the gaze is stabilized, the improvement wherein an inner casing frame and an outer casing frame are formed in a shape nearly similar to that of the holding frame, a shaft portion is protruded from the rear portion of the holding frame, a cylindrical portion is protruded from the rear portion of the inner casing frame so that the shaft portion of the holding frame is inserted therein, a stop fitting which engages with the rear portion of the outer frame is fitted to the cylindrical portion of the inner frame under the condition where said cylindrical portion is protruded beyond a through hole that is formed in the rear portion of the outer casing frame, and another stop fitting which engages with the rear portion of the inner case is fitted to the shaft portion of the holding frame.

70 The accompanying drawings illustrate an eyeball device for stuffed toys and dolls according to an embodiment of the present invention, wherein Figure 1 is an exploded perspective view of the device, and Figure 2 is a vertical section view showing the device in an assembled condition.

75 The invention will be described below in detail with reference to the drawings. In the drawings, reference numerals 1 and 2 denote semispherical eyeball parts which fit together to form an eyeball, 3 and 4 denote grooves formed in the joining portions thereof, 5 denotes a shaft which rotatably supports the eyeball, and 6 denotes a recessed portion for holding a stabilizer weight 7 formed in one eyeball part. Reference numerals 8 and 9 denote a projection and a groove for determining the correct alignment of the eyeball parts 1 and 2, and 10 denotes the pupil of the eye.

80 Reference numeral 11 denotes a holding cup which is formed in a frustoconical shape, which has a ring portion 12 and which holds the above-mentioned eyeball in an opening 13 thereof. Reference numerals 14 denote grooves for receiving the shaft 5, and 15 denotes a step in the opening with which will engage an inserting flange 17 of a circular cover 16. Reference numerals 18 and 19 denote a projection and a groove provided for locating the cover 16 relative to the ring portion 12. Reference numeral 20 denotes a small hole formed in the bottom of the holding cup 11, 21 denotes a shaft portion which is inserted in the small hole 20 and which protrudes beyond the rear portion of the holding cup 11, 22 denotes a protruded head which prevents the shaft portion 21 from escaping, 23 denotes projections that engage with the rear portion of the holding cup, 24 denotes a hole for the passage of a cord or the like, and 25 denotes a turn stop of the shaft portion 21 which engages with a wall 26 of the holding cup 11.

85 Reference numeral 27 denotes an inner casing of a frustoconical shape into which the holding cup 11 is fitted, 28 denotes a ring portion of a large diameter, and 29 denotes an opening which has a gear-like toothed flange 30 around the outer peripheral edge thereof. Reference numeral 31 denotes a cylindrical portion formed at the rear of the inner casing 27, and in which the shaft portion 21 of the holding cup 11 is inserted in such a manner that the through hole 24 thereof protrudes beyond the cylindrical portion. Reference numeral 32 denotes an outer casing of a frus-

toconical shape into which the inner casing 27 is fitted, 33 denotes a ring portion of the casing 32, 34 denotes an opening, 35 denotes a through hole which is formed in the rear portion of the outer casing 32, and through which the cylindrical portion 31 of the inner casing 27 is inserted.

The holding cup 11 and the inner casing 27 are brought into contact with each other along a conical plane, and the rear end surface 36 of the inner casing 27 and the inner surface at the rear end of the outer casing 32 are so set that a small gap is maintained therebetween when they are assembled. This permits easy adjustment when the device is fastened to the outer cloth 40 of a soft toy or doll. The above-mentioned parts are all made of resin molded products, except the shaft 5 and the weight 7. Reference numeral 38 denotes a locking washer fitted to the cylindrical portion 31 of the inner casing 27, 39 denotes a small locking washer fitted to the shaft portion 21 of the holding cup 11, and 41 denotes a cross-shaped slit formed in the outer cloth 40 to attach the eyeball device.

In the above-mentioned structure, the shaft portion 21 is mounted in the holding cup 11, an eyeball which is assembled together with the stabilizer weight 7 is rotatably mounted thereon using the shaft 5, and the cover 16 is adhered thereto to form an eyeball-holding assembly. The inner casing 27 is inserted through the slit 41 of the outer cloth 40 from the front side, and the outer casing 32 is fitted thereto from the back side. Then, the inner casing 27 and the outer casing 32 are fitted together in such a manner that the outer cloth 40 is trapped therebetween; i.e., the outer cloth 40 is reliably fastened owing to the teeth on the flange 30 biting into the cloth, and the locking washer 38 is fitted to the cylindrical portion 31. The eyeball-holding assembly may have been incorporated in the inner casing 27 in advance as a unitary structure, or may be fitted thereto from the outside after the assembling operation is finished up to this step. The small locking washer 39 may be smaller than the diameter of the through hole 35. In this case, the holding cup 11 is mounted in the inner casing 27 as a unitary structure. A gap is maintained between the rear end surface 36 of the inner casing 27 and the inner surface 37 at the rear end of the outer casing 32 under the assembled condition. Further, the biting flange 30 is movable inwardly or outwardly of the outer casing 32 along the inner surface of the ring portion 33 thereof. Therefore, if there is no margin in the boundary between the outer cloth 40 and the eyeball device the outer casing 32 should be pulled out. When it is desired to give tension to the outer cloth 40, on the other hand, the outer casing 32 should be pushed in. The locking washer 38 should be stopped at such a position on cylindrical portion 31 that a desired relation is obtained.

CLAIMS

1. An eyeball device for a stuffed toy or doll comprising a holding cup, an eyeball rotatably supported on a shaft in said holding cup, a stabilizer weight in said eyeball, a shaft portion extending rearwardly of the holding cup, an inner casing for receiving said

holding cup and an outer casing for receiving said inner casing with the outer cloth of the toy or doll trapped and bitten between the inner and outer casings, the inner and outer casings being of substantially the same shape as the holding cup, a cylindrical portion projecting rearwardly of the inner casing through which said shaft portion extends, an aperture in the rear portion of the outer casing through which said cylindrical portion extends, locking means on said cylindrical portion retaining the inner casing in the outer casing and locking means on said shaft portion retaining said holding cup in said inner casing.

2. An eyeball device according to claim 1, wherein said inner casing has a toothed flange thereon which cooperates with an inner surface of the outer casing to trap and bite said outer cloth therebetween.

3. An eyeball device according to claim 2, wherein said inner surface of the outer casing is a cylindrical surface and the inner casing is adjustable inwardly or outwardly of the outer casing.

4. An eyeball device according to claim 1, 2 or 3, wherein said locking means on said shaft portion is smaller than the aperture in the rear portion of the outer casing to enable the holding cup with the eyeball assembled therein to be assembled with the inner casing prior to assembly of the inner casing with the outer casing.

5. An eyeball device for a stuffed toy or doll, substantially as herein described with reference to the accompanying drawings.

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